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Confidential: Not to be quoted without previous reference to the writer or the Laboratory.

CRUISE REPORT.

F.R.S. "SCOTIA".

September, 1951.

ATMS:

The object of this cruise was to carry out a detailed biological and hydrographical survey of the Faroe plateau and to carry out extensive haddock marking experiments there.

GENERAL:

"SCOTIA" departed from Aberdeen at 12.00 hours on the 15th September and commenced work at stations at the Dog Hole, Buchan Deeps and off Kinnaird Head. Whilst proceeding northwards, several days bad weather led to a delay in Sinclair Bay, after which "SCOTIA" commenced, and successfully completed the Butt of Lewis-Faroe Bank line of hydrographic stations.

At Faroe, the weather was rather unsettled, and after several days delay in Klakksvig, owing to strong S.E. gales, "SCOTIA" finally set out for Aberdeen with two-thirds of the programme completed, and arrived back at 24.00 hours on the 28th September.

HYDROGRAPHY:

Temperatures and salinity samples were taken at 25 positions all round the islands. Mean surface temperatures varied from 9.90°C in the north-west to 9.59°C to the south. Mean bottom temperatures ranged from 9.41°C in the west and north west to 9.00°C in the east. Surface temperatures along the Butt of Lewis-Faroe line decreased steadily from a value of 12.62°C at the Butt, to 10.69°C on Faroe Bank.

pH values, along the Butt-Faroe line remained fairly constant throughout, varying from 8.00 to 8.30, whereas a decrease along this line was observable in phosphate values, which ranged from .25 μ gm. atoms PO₄-P/litre to 0.9 μ gm. atoms PO₄-P/litre.

At Faroe, phosphate values were fairly stable and ranged from 0.6 to 0.8 μ gm. atoms PO₄-P/litre. Vertical variations at each station were insignificant.

PLANKTON:

Moderate collections were taken in the townets along the Butt-Faroe line, and included Calanus finmarchicus, Limacina, Sagitta spp. Clio, Euphausiids, Myctophum, Tomopteris, Ctenophores, Medusae and Hyperiid Amphipods.

Collections around the Faroe Islands were poor, many exceedingly so. Aurelia was quite a common organism, occurring in one third of the 2 M vertical net samples, whilst other organisms that occurred rather sparingly were Calanus, Euphausiids, Limacina, Sagitta, Tomopteris and Hyperia.

TRAWLING:

Trawl hauls of an hour's duration were carried out at seventeen positions around the Faroes. 0- group haddock were well represented in the small mesh covering, and appeared to be a little more numerous than the 1950 brood, and about three times as dense as was the 1949 brood during September 1949.

Cod-end catches consisted almost exclusively of haddock of which an average of/

of 74 per hour's fishing was obtained. Nearly 90% of these fish were less than three years old. Other notable species represented from time to time were Lemon Sole, Whiting, Cod and Sebastes.

At six hauls, a considerable number of Aurelia were present in the net, and it was apparent that smaller numbers of fish were taken during these hauls than otherwise. The average catch per hours fishing of haddock at stations where a high incidence of Aurelia occurred was 44, whilst the average for other stations was 91.

ECHO-SOUNDING:

The laboratory echo-sounder (MS 24) was run fairly continuously throughout the trip, and in general no definite fish-traces were observed. On several instances however, once while crossing the Moray Firth, and the other to the west of Myling Head (Faroe) well marked fish traces were observed near the bottom. It is believed that these may have been caused by herring.

R. JONES. *R. Jones*

8th October, 1951.

CIRCULATION:

Mr. W. Russell
Capt. C.H. Champness
Mr. M. Graham
Dr. C.E. Lucas
Dr. J.N. Carruthers
Secretary, I.C.E.S.
Dr. A.V. Tanning
Dr. F. Devold
Dr. H. Thomsen

Mr. F.S. Russell
Mr. E. Ford
Mr. K.M. Rae
Dr. G. Reay
Dr. H. Wood
Dr. J.B. Tait
Dr. J.H. Fraser
Dr. A. Ritchie
Dr. B.B. Rae

Mr. B.B. Parrish
Capt. G.B. McLaren
Capt. E.A. Bruce
Mr. R. Jones
Mr. R.G.G. Lawrie
Mr. B.B. Fraser
Mr. D.D. Scaton
Spare 7.